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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,657	09/18/2001	Andreas Kellner	DE000148	7508

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EXAMINER	
VO, HUYEN X	

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/954,657	KELLNER ET AL.	
	Examiner	Art Unit	
	Huyen Vo	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date: _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 8/9/2004 have been fully considered but they are not persuasive. With respect to claims 1 and 7, the applicant argues to traverse the prior art rejection regarding the limitations "*the user models contain details about the style of speech of user inputs and/or indications about interactions in dialogs between users and the dialog system*" and "*adaptation of contents and/or form of system outputs is provided in dependence on the user models*" (Amendment page 8). However, Junqua et al. fully meet the limitations above. The speech models generated by a particular user must include all the speech characteristics/styles of that user that is distinguished from other users. Also, the usage log is used to keep track the user's viewing records, and is it updated to include new usage data (*col. 2, line 54 to col. 3, line 26*).

2. Regarding claims 3-4, the applicant argues to traverse the prior art rejection regarding limitation "*the user models contain estimates for the reliability of recognition results derived from user's input*". However, Junqua et al. disclose a speech recognition process that generates confidence scores indicating how well the input was recognized, wherein the speech recognition vocabularies are stored in the user's profile (*col. 6, lines 46-55*).

3. Subject matters presented in claim 12 were not claimed before the first Office Action. Therefore, the examiner lied upon an additional reference to reject this claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3, and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Junqua et al. (US Patent No. 6415257).

6. Regarding claims 1 and 7, Junqua et al. disclose a dialog system and a method of operating a dialog system (figure 3) comprising processing units for

automatic speech recognition (12 of figure 1),

natural language understanding (24 of figure 1),

defining system outputs in dependence on information derived from user inputs (col. 2, ln. 28-31),

generating acoustic and/or visual system outputs (col. 10 ln. 65 to col. 11, ln. 3 and/or element 36 of figure 1),

deriving user models (col. 2, ln. 36-42, input speech signal is processed and parameterized for used in the speech recognition process).

while the user models contain details about the style of speech of user inputs and/or details about interactions in dialogs between users and the dialog system and adaptation of contents and/or form of system outputs is provided in dependence on the user models (col. 2, ln. 54 to col. 3, ln. 26 or referring to figure 2, the user's profile includes a log that keeps track of user's view preferences and user's speech patterns).

7. Regarding claim 8, Junqua et al. disclose a process for television-user dialog, comprising the steps of: receiving user speech input (*element 10 in figure 1*); processing the speech input using automatic speech recognition and natural language understanding (*elements 12 and 24 in figure 1*); and defining at least one system output based on the speech input and a user model (*col. 2, lines 54 to col. 3, line 67*).

8. Regarding claim 3, Junqua et al. further disclose a dialog system characterized in that the user models contain estimates for the reliability of recognition results derived from user inputs (col. 7, ln. 1-32, the score associated with each candidate represents the reliability of each recognized candidate).

9. Regarding claim 5, Junqua et al. further disclose a dialog system characterized in that fixed models of user stereotypes are used for forming the user models (col. 8, ln. 8-26, a speaker adaptation process).

10. Regarding claim 6, Junqua et al. further disclose a dialog system characterized in that user models are used which are continuously updated based on inputs of the respective user (col. 3, ln. 1-27, the system includes a usage log recording user's everyday uses of the system).

11. Regarding claim 11, Junqua et al. further disclose the process of Claim 8, wherein the step of defining comprises the step of: defining at least one system output based on the speech input and a user model which includes a familiarity level, wherein the system output is based on the familiarity level (*col. 3, lines 1-25, familiarity level is determined by how often and/or how long the user has used the system and that is specified in the usage log*).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Junqua et al. (US Patent No. 6415257) in view of Larsen (IEEE Publication).

14. Regarding claim 2, Junqua et al. further disclose a dialog system characterized in that in addition to the input modality to use user inputs by means of speech, at least a further input modality is provided (col. 3, ln. 35-44). Junqua et al. do not disclose a dialog system characterized in that the user models contain details about the respective use of the various input modalities by the user.

However, Larsen teaches a bi-modal application used in a dialog system, where a DTMF input mode is used if repeated recognition errors occur in the speech recognition mode (referring to APPLICATION SECTION on pages 66-67). The advantage of using the teaching of Larsen in Junqua et al. is to enable the system to take appropriate actions to process the input signal to achieve high accuracy.

Since Junqua et al. and Larsen are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Junqua et al. by incorporating the teaching of Larsen in order to enable the system to take appropriate actions to process the input signal to achieve high accuracy.

The modified Junqua et al. still fail to disclose a dialog system characterized in that the user models contain details about the respective use of the various input modalities by the user. However, it would have been obvious to one of ordinary skill in the art at the time of invention to readily realize that both DTMF and speech input modes, as taught by Larsen, are different and both are represented by two distinct signals. Therefore, the system would have distinguished and processed these two signals differently in order to enhance the system's efficiency and reliability.

15. Regarding claim 4, Junqua et al. do not disclose a dialog system characterized in that in dependence on the estimates, system responses are generated which prompt the respective user to use such input modalities for which high estimate values were determined and/or which prevent the respective user from using input modalities for which low reliability values were determined.

However, Larsen teaches a dialog system characterized in that in dependence on the estimates, system responses are generated which prompt the respective user to use such input modalities for which high estimate values were determined and/or which prevent the respective user from using input modalities for which low reliability values were determined (referring to APPLICATION SECTION on pages 66-67). The advantage of using the teaching of Larsen in the modified Junqua et al. is to allow the system to switch to a different input mode to achieve high recognition accuracy.

Since the modified Junqua et al. and Larsen are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to further modify Junqua et al. by incorporating the teaching of Larsen in order to allow the system to switch to a different input mode to achieve high recognition accuracy.

16. Regarding claim 9, Junqua et al. further disclose the process of Claim 8, wherein the step of defining comprises the step of: defining at least one system output based on the speech input and a user model which includes an experience level (*col. 3, lines 1-*

25, experience level is determined how often and how long the user has used the system and that is specified in the usage log).

Junqua et al. fail to specifically disclose that the system output is based on the experience level of the user model in that if the experience level is low, the system output is a first length, while if the experience level is high, the system output is a second length lesser than the first length. However, Larsen teaches the step of advising the user which input modalities to use according to their experience level (*Application Section on pages 66-67, it is inherent that the advise phrase outputted by the system for the experience user is shorter than for inexperience user, (e.g. "do" and "do not")*).

Since Junqua et al. and Larsen are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Junqua et al. by incorporating the teaching of Larsen in order to allow the system to switch to a different input mode to achieve effective communication between the user and the system.

17. Regarding claim 10, Junqua et al. further teach the process of Claim 8, wherein the step of defining comprises the step of: defining at least one system output based on the speech input and a user model, wherein the system output is based on the likely input modality (*col. 3, lines 1-67*). Junqua et al. fail to specifically disclose a user model, which includes a likely input modality for a current prompt. However, Larsen teaches a

user model, which includes a likely input modality for a current prompt (*referring to APPLICATION SECTION on pages 66-67*).

Since Junqua et al. and Larsen are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art at the time of invention to modify Junqua et al. by incorporating the teaching of Larsen in order to enable the system to take appropriate actions to process the input signal to achieve high accuracy.

18. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Junqua et al. (US Patent No. 6415257) in view of Toyama et al. (US Patent No. 6502082).

19. Regarding claim 12, Junqua et al. fails to specifically disclose the process of claim 8 further comprising the steps of: receiving a user face image: and determining a degree of despair based on the user face image (*col. 1, lines 38-54*); wherein the step of defining comprises the step of: defining at least one system output based on the degree of despair (*col. 1, lines 38-54*). However, Toyama et al. teach the steps of: receiving a user face image: and determining a degree of despair based on the user face image (*col. 1, lines 38-54*); wherein the step of defining comprises the step of: defining at least one system output based on the degree of despair (*col. 1, lines 38-54*).

Since Junqua et al. and Toyama et al. are analogous art because they are from the same field of endeavors it would have been obvious to one of ordinary skill in the art

at the time of invention to modify Junqua et al. by incorporating the teaching of Toyama et al. in order to specify the system to provide appropriate services for the user.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo December 16, 2004

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SUSAN MCFADDEN
PRIMARY EXAMINER